UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Forest Insect & Disease Management
P.O. Box 5895, Asheville, NC 28803

REPLY TO: 3400 Forest Insect & Disease Management January 16, 1979

SUBJECT: Jumping Branch Fire, Andrew Pickens Ranger District, Francis Marion & Sumter National Forests, Insect and Disease Evaluation Report No. 79-1-2

TO: Donald W. Eng, Forest Supervisor
Francis Marion & Sumter National Forests, South Carolina

During the fall of 1978, Forest Insect and Disease Management examined the 2,850-acre Jumping Branch fire for pine bark beetle activity. The examination showed very limited activity. A few scattered trees were infested with two species of Ips, Ips calligraphus Germ. and Ips grandicollis (Eichh.), the coarse writing engraver and the southern pine engraver. Both of these Ips bark beetles are considered secondary causal agents and would not have been present in the trees if they had not been weakened severely or almost killed by the fire. A few black turpentine beetle, Dendroctonus terebrans Oliv., attacked trees were also scattered throughout the burn. However, here again the fresh resin exuding from some of the heavily scorched trees attracted the turpentine beetles. These beetles also seek out and find weakened and stressed trees.

We feel that bark beetles will not be a problem in the Jumping Branch fire area, because by next spring the damaged pine in the area will not be suitable hosts for any of the southern pine bark beetles. However, damaged hardwood will probably experience considerable butt rot and decay due to numerous fire scars on the lower boles of the trees. These fire scars are perfect infection points for numerous wood rotting fungi which can cause considerable degrade in hardwood lumber. There is no control or preventative measure for this damage following fires. In future timber stand prescriptions, heavily damaged trees with severe cankers or butt rot should be marked for removal through sanitation salvage or thinnings.

During our visit we were also asked to look at a small 15-acre area, not related to and some distance from the burn. This area had been planted in pine last winter. The problem in this planting was seedling survival. We examined the area and found that approximately 35 to 50 percent of the planted seedlings had been attacked and killed by the pales weevil, Hylobius pales Herbst. The weevil was inactive at the time of inspection, so no further damage should occur in that particular area. However, this pales activity brought up a question, "How high is the pales weevil population in the pine type areas of the Jumping Branch fire, particularly in the areas where pine had been salvaged during late June, July, August and early September?" These areas were delineated and surveys for the pales weevil conducted.

In the 100-acre Dodge Mountain area where salvage of large volumes of pine timber occurred during July and August, the survey showed a high population of pales weevils. The Jumping Branch or Cherokee Lake area also showed a relatively heavy population of the insect. Areas where damaged pine timber was sparce and not harvested through salvage, but left standing did not have any weevil activity.

The pales weevil population in the Dodge Mountain area and the Jumping Branch or Cherokee Lake area of the burn is high enough to cause considerable damage to seedlings if planted this winter. Therefore, control is warranted in these areas and any similar areas if planting cannot be delayed until next year. By delaying planting for one season, the pales population will disperse. Dispersal will occur because the slash and stumps left after salvage a year later will no longer be suitable for weevil reproduction.

Control can best be achieved in areas to be planted this winter by using a top dip or field spray. Our recommendation is the top dip using Imidan and Nu-File 17 as a spreader sticker. These two chemicals are registered by EPA for pales control. Control can best be achieved by delaying the planting of treated seedlings until February or March. The longer we can delay planting the better the chances that control will be good, because the insecticide will last longer into the feeding period of the weevils. Therefore, if planting can be delayed until mid-February or March our success in control will be much greater.

The previous information I sent you has all of the information needed to mix the Imidan dip. The Imidan label shows 3 1/2 pounds of Imidan 50 WP in water to make 5 gallons of dip at a 4 percent rate. Jack Nord also recommended using Nu-Film 17 as a spreader sticker at the rate of 20 ounces per 5 gallons of mixture. We feel this would be the best treatment for the seedlings to be planted in the high risk areas.

We would like to be present when the seedling treatment takes place so please let me know the date planned. We have also asked our pesticide specialist in S&PF to get us a source of Imidan and Nu-Film 17 for your area.

Please contact us if you have any further questions. As soon as we get the information on where we can purchase the Imidan and Nu-Film 17, we will contact O. D. Smith and District Ranger, William Craig.

Harold Flake for

PATRICK J. BARRY
Supervisory Entomologist

cc: William S. Craig, District Ranger, Andrew Pickens RD
O. D. Smith, Francis Marion & Sumter NF